Portrayals of Overweight and Obese Individuals on Commercial Television

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Objectives. This study examined the distribution and individual characteristics of body types on prime-time television.

Methods. Five episodes of each of the 10 top-rated prime-time fictional programs on 6 broadcast networks during the 1999–2000 season were quantitatively analyzed.

Results. Of 1018 major television characters, 14% of females and 24% of males were overweight or obese, less than half their percentages in the general population. Overweight and obese females were less likely to be considered attractive, to interact with romantic partners, or to display physical affection. Overweight and obese males were less likely to interact with romantic partners and friends or to talk about dating and were more likely to be shown eating.

Conclusions. Overweight and obese television characters are associated with specific negative characteristics. (*Am J Public Health.* 2003;93:1342–1348)

Obesity poses a major public health challenge. Surveys continue to show increased rates of obesity both in the United States, where rates increased 50% between 1991 and 1998, and in most other countries around the world.[1–4] The problem is especially alarming in children.[5,6] In 1993, McGinnis and Foege estimated that 300 000 premature deaths attributable to poor diet and physical inactivity occurred annually in the United States, as compared with 500 000 deaths attributable to smoking.[7] A more recent analysis revealed that obesity is associated with worse health-related quality of life and higher rates of chronic medical conditions than is lifetime smoking, poverty, or problem drinking.[8]

The damaging consequences of obesity in terms of health and well-being are considerable.[4,8,9] They result from the physical effects of the condition but also are influenced by the social ramifications of being overweight.[10–13] Negative stereotypes are attached to obese individuals, who are often thought to be undisciplined, dishonest, sloppy, ugly, socially unattractive, sexually unskilled, and less likely to do productive work, among other attributes.[14,15] The result is bias and discrimination aimed at overweight persons in important areas of living, including education, employment, and medical care.[16]

Stigma and discrimination are key social and environmental factors that contribute to health.[17] Research shows that poor health, diminished quality of life, lowered access to health services, reluctance to seek health care, and possibly poorer care received from providers are related to discrimination based on race, age, and gender.[17–22] Because obese persons may face similar consequences, there is a need to understand how and why negative social attitudes are communicated.

Attitudes regarding various health issues (e.g., substance abuse and youth violence, as well as obesity) are communicated through multiple channels. One central channel has been the popular media, whose treatment of such issues is important because their content communicates social norms and models behaviors.[23–26] Just as media portrayals of alcohol or tobacco use may glamorize these activities, media images of various body types may shape viewers' perceptions of overweight and obese individuals. Social science researchers,[27–29] social commentators,[30,31] and the popular press[32] contend that television in particular may perpetuate negative stereotypes of obese persons because of its idealization of thin characters. Those who make this argument point out that slender characters appear more often on television than do overweight persons and are ascribed a higher number of positive traits, behaviors, and roles than are overweight persons. They also suggest that overweight persons are ridiculed and shown to be undesirable in a variety of ways.[28] However, these contentions are speculative, because there has been little systematic analysis to document characteristics and behaviors across a range of body types.

Existing data suggest a bias in favor of thin persons and negative portrayals of obese individuals. A quarter-century ago, Kaufman examined body types portrayed on 10 highly rated television series from the 1977 season.[27] She found the following percentages in terms of portrayals of various body types: obese, 5%; overweight, 15%; average weight, 42%; and thin, 38%. Among African American characters, 90% were obese, whereas "neither children nor young adults were ever obese or overweight . . . [and] negative characteristics were more frequently associated with overweight and obesity."[27(p44)]

Fouts and Burggraf showed that male characters in situation comedies gave more negative feedback to larger than to thinner female characters and that these interactions were often accompanied by audience laughter.[28] Jain and Tirodkar found that, during the 1999 television season, 27% of the characters in 4 situation comedies highly rated among African Americans were overweight, as compared with only 2% of the characters in 4 situation comedies highly rated among general audiences.[29]

To understand better the social factors contributing to ill health and well-being among obese individuals, we undertook a large-scale content analysis of television's portrayal of characters on popular prime-time shows. Our goal was to provide a detailed analysis of the roles given to overweight and underweight characters and a comprehensive examination of their social interactions.

METHODS

Television Program Sample

We identified the 10 fictional series on each of 6 major broadcast television networks (ABC, CBS, Fox, NBC, UPN, and WB) with the largest Neilsen audience ratings during the 1999–2000 season. The goal was to videotape 5 episodes of each series. The final sample was composed of 275 (of a possible 300) episodes from 56 (of 60) different series. The remaining 25 episodes involved series featuring nonhuman characters and cancelled series not available for taping. The sample provided 210 hours of taped programs.

Coder Training

Two teams of 5 coders each were trained to code all demographic variables, including body types. One team then was assigned to code content variables that dealt with individual attributes and interactions, while the other team focused on individual behaviors. After completion of training, 92% of the variables were shown to have intercoder reliabilities of at least .80. Five weeks after the initiation of coding, reliability was retested and averaged .82.

Content Variables

The analysis was based on coding of "major" characters. We established this criterion by measuring "speaking turns." A speaking turn occurs any time a character speaks, ending when another character begins his or her speaking turn. In the case of half-hour episodes, any character with 7 or more speaking turns was classified as a major character. On hour-long shows, major characters had 12 or more speaking turns. We determined these criteria by empirically testing alternative standards. Children younger than 13 years and nonhuman characters were not analyzed.

We coded, for each major character, a measure of body type adapted from Thompson and Gray's (1995) Body Image Assessment Scale.[33] This instrument consists of a verbal scale in which responses range from 1 (very underweight) to 6 (extremely overweight), and it includes silhouette images as visual references. We also coded gender, age, marital status, and race.

Interactions

We examined the number of interactions each character had with individuals who were family members, romantic or dating partners, coworkers, nonromantic friends, and strangers. We also evaluated types of interactions within scenes, coded as positive interactions, negative interactions, or leadership interactions.

Attributes

We also examined qualitative attributes of the major characters. The first subset of variables included the number of scenes in which characters were displayed being jolly, loud, respected, ridiculed, charming, or annoying. The second subset was coded at the episode level and included the following attributes: sloppy, attractive, smart, happy with self, and sickly. We coded the presence of these attributes on a 3-point scale ranging from "not at all" to "very much."

General Behaviors

These character behavior variables addressed the number of times each character either engaged in or talked about eating, drinking alcohol, drinking a beverage other than alcohol, exercising, and smoking and the number of times each character was alone and doing nothing that required physical effort. Three variables concerned dating: the number of times the character went on a date, the number of times he or she was turned down for a date, and the number of times he or she expressed an inability to have a long-term relationship.

Sexual Behaviors

For variables addressing sexual behavior, we counted the number of times the character originated or was the recipient of sexual innuendo, showed physical affection, was rejected in efforts to engage in sexual activity, talked about having sex, talked about someone else having sex, and engaged in visually implied sexual intercourse.

Role Behaviors

We assessed the different roles played by each major character. Included were the number of times the character (1) was portrayed as providing emotional support, (2) behaved in ways that emotionally injured another character, (3) helped or hindered the efforts of another character in achieving a task, (4) was the object or originator of humor, and (5) was the victim or perpetrator of a violent act.

RESULTS

In all, 1018 television characters emerged as "major" characters; 59% of these characters were male, 78% were White, 11% were identifiably married, 4% clearly had children of any age, and the modal age decade was 30s (38%). We compared the overall distribution of body types on these prime-time commercial television programs with the overall distribution of body types in the United States using body mass index[34] (BMI) as the criterion. Four leading researchers in the obesity field assigned BMI estimates to the body type silhouettes employed; we used the mean of their ratings in calculating BMIs. Figures 1 and 2 compare the television and real-world distributions of male and female body types.

Whereas 1 in 4 women in reality are obese, the television figure was 3 in 100; whereas 5% of all women in reality are underweight, nearly 1 in 3 portrayed on television were underweight. More generally, half of women in reality are average or underweight, as compared with 87% of television women. Men in real life are 3 times more likely to be obese than their television peers; male television characters were 6 times more likely to be underweight than their counterparts in real life.

Demographic Characteristics

The findings presented in Table 1 yield several significant differences. Men on television had larger body types than women ($P<.001$). African American characters had larger body types than Whites ($P<.03$), and African American females had larger body types than White females ($P<.001$); 23% of African American females and 9% of White females had body type scores larger than 3.5 (the midpoint of the scale). Married television characters had larger body types than unmarried characters ($P<.06$), with married men being significantly larger than unmarried ones ($P<.01$). Unemployed men were larger than employed men ($P<.02$).

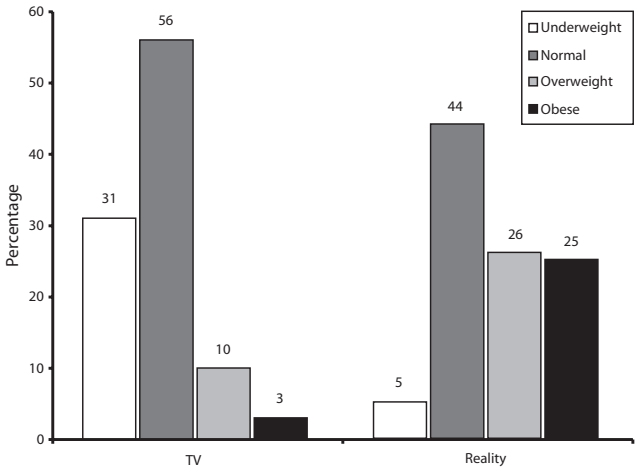

FIGURE 1—Comparison of female body types: television versus reality 1999–2000.

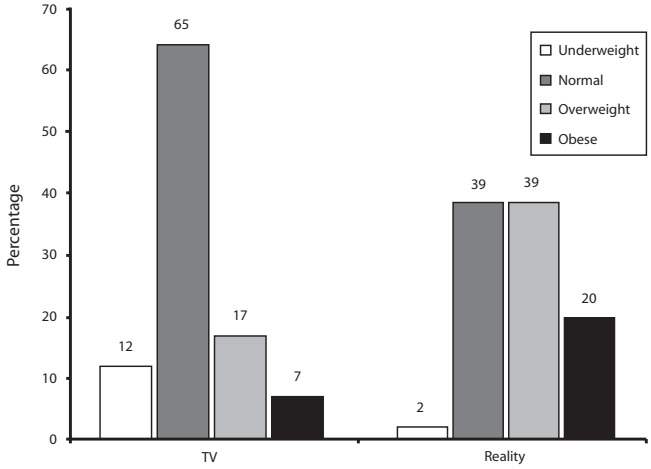

FIGURE 2—Comparison of male body types: television versus reality 1999–2000.

Body size increases with age. We found that characters aged 60 years and older had larger body types than did those in their 40s and 50s, who in turn were larger than characters who ranged from their teens through their 30s ($P<.001$). Among women, larger body sizes began at an earlier age; 25% of those aged 40 years or older, as compared with 6% of those aged younger than 40 years, had large body types ($P<.001$). Among men, the largest body type scores occurred among those in their 60s (65%), followed by those in the 30- to 50-year age range (25%); the smallest body types were found among those in their teens or 20s (4%; $P<.001$).

Program Characteristics

Table 1 also shows that (nonrecurring) guest characters were larger than regular (recurring) characters ($P<.004$). This was especially the case among males ($P<.01$); 26% of guest male characters and 15% of recurring male characters had larger body types. Television characters in 30-minute shows were larger than characters in 60-minute shows ($P<.04$). When the difference in body size by length of show was examined further by gender, a significant difference was found for female ($P<.05$) but not male characters.

When findings were analyzed according to program genre, characters in situation comedies were shown to be larger than characters in dramas ($P<.05$). In terms of prevalence rates of body types portrayed (from largest to smallest) on the different networks, CBS, Fox, and UPN exhibited the same prevalence and ranked first, followed in order by NBC, ABC, and WB ($P<.04$). The largest male characters were portrayed on Fox, CBS, and UPN, and the smallest were portrayed on WB and ABC ($P<.05$). As an example, 24% of the male characters portrayed on CBS had larger body types, as compared with 12% of the male characters portrayed on WB.

Interactions, Attributes, and Behaviors

In the analysis of social interactions, attributes, and behaviors according to body type classification, the original 6 body type categories were reduced to 3 to avoid small cell sizes. Average body types with rating scores of 2.5 or less (on the 6-point scale) were labeled as "thinner," those with scores between 2.6 and 3.5 were labeled as "middle," and those with scores above 3.5 were labeled as "larger" (see Table 2).

Scene-level interactions. Larger male and female television characters had fewer romantic interactions. Among women, 10% of the characters in the larger group, 24% of the characters in the middle group, and 36% of the characters in the thinner group had romantic interactions ($P<.001$ for group differences). The corresponding percentages among men were 10%, 20%, and 17% ($P<.02$ for group differences). Larger male characters also had fewer interactions with friends; such interactions occurred among 60% of male characters with larger body types, as compared with 70% of those with smaller body types ($P<.06$).

Larger male and female characters were less likely to have positive interactions. Among females, 32% of the larger characters had positive interactions with others, in comparison with 44% of the middle group and 51% of the thinner group ($P<.05$). For men, 25% of the larger characters had positive interactions, as opposed to 36% of the characters in each of the other 2 groups ($P<.03$). Leadership interactions were least frequent among larger males (13%; $P<.06$).

Physical attributes. Larger characters were less likely to be judged as attractive. Forty-nine

TABLE 1—Mean Character Body Sizes, by Demographic and Program Variables

Characteristic	Classification	Mean[a]	F	P
Demographics				
Gender	Male	3.17	50.26	<.001
	Female	2.83		
Race	African American	3.14	4.81	<.03
	White	3.00		
Race × Gender	African American female	3.08	10.54	<.001
	White female	2.78		
Marital status	Married	3.15	3.63	<.06
	Unmarried	3.01		
Marital Status × Gender	Married male	3.40	7.89	<.01
	Unmarried male	3.14		
Employment status	Employed	3.03	.04	NS
	Unemployed	2.95		
Employment × Gender	Employed male	3.12	5.13	<.02
	Unemployed male	3.28		
Age	≥ 60 years	3.61	24.18	<.001
	40s–50s	3.26		
	Teens–30s	2.86		
Age × Gender	≥ 40 female	3.21	10.25	<.001
	Teens–30s female	2.68		
	≥ 60 male	3.76	31.60	<.001
	30s–50s male	3.23		
	Teens–20s male	2.80		
Program				
Recurring characters	Guests	3.07	8.28	<.004
	Regular characters	2.93		
Recurring Characters × Gender	Guest male	3.21	6.36	<.01
	Regular male	3.05		
Show length	Half-hour	3.09	4.62	<.04
	Hour	2.99		
Show Length × Gender	Half-hour female	2.93	5.52	<.05
	Hour female	2.76		
Genre	Comedy	3.07	3.94	<.05
	Drama	2.98		
Genre × Gender	Comedy female	2.91	3.68	<.06
	Drama female	2.77		
Network	CBS	3.13	2.37	<.04
	Fox	3.09		
	UPN	3.10		
	NBC	2.99		
	ABC	2.96		
	WB	2.91		

Note. Significant differences may have resulted in part from the large sample. Some of the results may have marginal clinical significance and should be interpreted with caution. The following program and demographic variables did not produce statistically significant results: program content rating, job description, and number of children. NS = nonsignificant.
[a]On a scale ranging from 1 (very underweight) to 6 (extremely overweight).

percent of larger females were judged to be attractive, as compared with 92% of females in the other body type groups ($P<.001$).

Personality attributes. Of the larger male television characters, 15% were judged as charming, as compared with 24% of the male characters in the other 2 groups ($P<.04$). Respect ratings for larger females exceeded those for females in the other body type categories (larger group, 28%; middle group, 16%; thinner group, 25%) ($P<.04$). Our results indicated that ridicule occurred less frequently among larger males (32%) than among thin males (49%; $P<.04$). However, fewer larger males (86%) than males in the other body type groups were rated as smart ($P<.001$). In addition, fewer large males (21%) than males in the middle group (47%) and the thinner group (61%) were judged to be loud ($P<.08$).

Role behaviors. Larger television characters were less helpful in task-oriented situations. Fewer larger females (21%) and females in the middle group (18%) than thinner females (30%) helped others with tasks ($P<.03$). In addition, only 12% of larger male characters helped others with tasks, as compared with 21% of male characters in the middle group and 18% in the thinner group ($P<.07$).

Larger females were almost twice as often the objects of humor as females in the middle or thinner group ($P<.03$). Larger (14%) and thinner (13%) males were less likely to commit violent acts than were those in the middle body type group ($P<.02$).

Eating, drinking, and smoking. Fewer large females (8%) than females in the middle (17%) or thinner (27%) group were portrayed consuming beverages other than alcohol ($P<.01$). Larger males were seen eating more often than males in the middle body type group, who ate more often than the thinner characters ($P<.03$).

Dating behaviors and sexual activity. Fewer large males (only 8%) than males in the other body type groups (25%) talked about dating ($P<.001$). On average, females in the larger and middle body type groups showed physical affection less often than did females in the thinner group ($P<.05$).

Secondary analyses of behaviors. Behavior patterns among males suggested that the characters in the middle group were more fa-

TABLE 2—Body Type Percentages: Interactions, Attributes, and Behaviors

	Group, %				
	Thinner	Middle	Larger	χ^2	*P*
Interactions					
Romantic					
Male	17	20	10	7.88	<.02
Female	36	24	10	13.11	<.001
Male friend	71	70	60	6.93	<.06
Positive					
Male friend	36	36	25	5.05	<.03
Female friend	51	44	32	3.95	<.05
Leadership: male	18	22	13	5.75	<.06
Attributes					
Attractive: female	93	91	49	68.62	<.001
Loud: male	61	47	21	5.23	<.08
Charming: male	23	26	15	6.65	<.04
Respected: female	25	16	28	6.70	<.04
Ridiculed: male	49	37	32	6.62	<.04
Behaviors					
Help other with task					
Female	30	18	21	7.13	<.02
Male	18	21	12	5.46	<.07
Violence: male	13	23	13	8.41	<.02
Drinking nonalcoholic beverage: female	27	17	8	9.70	<.005
Talking about dating: male	26	24	8	16.88	<.001

Note. Chi-square values were calculated from frequencies rather than percentages. Significant differences reported in the text among males in terms of frequency of eating and among women in terms of being the object of humor and showing physical affection were obtained via analysis of variance statistics. Significant differences may have resulted in part from the large sample. Some of the results may have marginal clinical significance and should be interpreted with caution. No statistically significant differences were found for the following attributes: jolly, annoying, sloppy, happy, and sickly. Also, no significant differences were found for the following types of interactions: family, coworker, stranger, and negative. Finally, no significant differences were found for the following behaviors: talking about eating, talking about drinking beverages other than alcohol, talking about drinking alcohol, drinking alcohol, talking about exercise, exercising, talking about smoking, smoking, number of dates, originator of sexual innuendo, target of sexual innuendo, talking about others having sex, having sex, sex visually implied, providing emotional support, providing emotional injury, hindering another in task achievement, originator of humor, and victim of violence.

vored than either the thinner or the larger characters. Contrasting the largest characters with all other characters yielded the following additional results: larger male characters were less likely to date ($P<.05$) and less likely to have sex ($P<.06$).

Regression Analyses

Multiple regression was used to determine the relative strength and independence of the large set of univariate correlates of body type. Executed separately for male and female characters, these analyses included only variables that had been significant at $P<.10$ or greater to avoid type I errors.

The variables used in the multiple regression analysis for the male television characters were age, marital status, employment, network on which series aired, recurring characters, romantic interactions, friendship, leadership and positive interactions, particular character attributes (e.g., charming, smart), helping with tasks, committing violent acts, eating, talking about dating, dating, and having sex. This set of variables yielded a multiple R value of .382 ($P<.001$). Five individual variables had significant beta coefficients: age ($P<.001$), employment ($P<.04$), recurring characters ($P<.05$), talking about dating ($P<.04$), and eating ($P<.01$). Larger male television characters were older, less likely to be employed, more likely to be guests on shows, less likely to talk about dating, and more likely to be portrayed as eating.

Variables included in the parallel analysis for female characters were race, age, length of show, genre of show, romantic and positive interactions, attractiveness, respect, helping with tasks, being objects of humor, consuming beverages other than alcohol, and showing physical affection. This smaller set of predictors yielded a substantially larger multiple R value of .498 ($P<.001$). Five individual variables had significant beta coefficients: age ($P<.001$), race ($P<.03$), length of show ($P<.05$), romantic interactions ($P<.002$), and attractiveness ($P<.001$). Larger females were more likely to be older, more likely to be members of minority groups, more likely to be on 30-minute shows (situation comedies), less likely to have romantic interactions, and less likely to be deemed attractive.

DISCUSSION

Prime-time television continues to be a preeminent pastime among people in the United States, with top-rated programs reaching audiences as large as 30 million viewers weekly.[35] It is important to document the portrayals of various body types because of the large and diverse audience exposed to these images. To the extent that television creates or perpetuates negative stereotypes of obesity, it may have an impact on the bias and discrimination aimed at obese individuals.[11–14] Considering that the majority of the US population is overweight, the public health impact of negative stereotyping may be significant.[36]

Our results show the comparative neglect of overweight individuals on television and the imbalance toward thinner men and, especially, thinner women. The emphasis on thin body types is not a new finding; it also has been documented in mass media advertising.[37] Television, of course, has no mandate to represent the population accurately in its fictional series. Other patterns of misrepresentation on entertainment television have been well identified; for example, males typically outnumber females by about 2 to 1 in prime-time programming,[38] Hispanics are un-

derrepresented,[39] and unmarried individuals are overrepresented.[38] If the mass media omit or ignore a particular group, it is assumed, with some supportive evidence, that such groups are deemed of lesser value and importance.[40] A prevalent and consistent focus on thinness may have a powerful effect on self-esteem, employment concerns, and interpersonal relationships among individuals who are overweight.

Important differences exist in portrayals of weight among men and women. Thinner women are portrayed more positively and larger ones more negatively, whereas both of these deviations from "normal" weight may serve to stigmatize men. The sought-after weight for men appears to be neither large nor thin, although largeness may be more negative than thinness. Thus, research on the relationship between media portrayals and attributional or behavioral outcomes must consider that males and females may respond similarly (and negatively) to large images of their own gender but differently to thin images.

The present analysis of the demography of the population of television fiction implies that the category of large characters encompasses a roster of "out-group" characteristics. Larger characters are more likely to be members of ethnic minority groups, older, married, and unemployed; also, they are more likely to be guests on shows and to be portrayed in comedies as opposed to dramas. Even before consideration of their behaviors, attributes, and interactions, there are 2 strikes against overweight individuals: they are less frequently present and more likely to be cast in roles outside the mainstream of television fiction.

The third strike is the comparative "inactivity" or passivity in terms of their roles. For example, the larger characters observed in this study consistently had fewer interactions with friends or romantic partners and were involved in fewer behaviorally oriented tasks (e.g., leadership interactions). Larger characters were less likely to help with tasks, to demonstrate physical affection, to date, and to have sex. In addition, they were more likely to be seen eating and to be the objects of humor, 2 elements that can be considered stronger indicators of inertia than of energy.

However, there were a few positive findings in terms of portrayals of overweight characters. One was evidence that larger female characters receive more respect and larger male characters receive less ridicule; it is notable that the greatest amount of ridicule was aimed toward the thinnest male characters. No significant differences were found for a number of content variables, many of which represent stereotypical attributes associated with weight. Being jolly, sloppy, sickly, annoying, and happy were not attributes that made a difference. Exercise, consumption of alcohol, and several components of sexual activity also did not yield character differences. Without trend data, we cannot assess whether the lack of differences in these areas has been consistent over time or reflects an improving trend.

Two approaches in mass communication research suggest the probable impact of portrayals of large (or thin) characters. The first is that such images accumulate over time and eventually result in real-world expectations that correspond to media presentations.[41] Some evidence supports the argument that viewing television is related to holding stereotypes about obese individuals. In a study of elementary school children, Harrison[42] found that the more television boys watched, the more likely they were to assign negative stereotypes to an overweight female.

According to the second approach, not all images are equivalent, and audience members will orient themselves to characters they favor.[43] For example, some viewers of Camryn Manheim, an overweight character on the ABC television series *The Practice,* may be most impressed with her professional success, whereas others may be most impressed by her decision to be a single mother. For such viewers, this individual character portrayal may be more important than more tepid portrayals of overweight women in other shows.

Research could determine whether overweight female viewers will respond to a strong, positive portrayal of an overweight woman in a way that parallels the responses of female viewers in the case of other body types or whether their greater identification results in more intense responses. A related research issue is whether infrequent but strong, positive portrayals can compensate for the larger number of stigmatized portrayals. Finally, possibilities for future research in this area include the following: (1) content studies focusing on other forms of mass media that reach large numbers of adults and young people, such as movies and magazines; (2) survey research designed to determine the relationship between what is seen, read, or heard about different body types and the resulting attitudes and beliefs that are formed; and (3) experimental research aimed at examining message components that would reduce biases associated with individuals who are overweight. ■

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This article was accepted May 24, 2002.

Contributors

B.S. Greenberg contributed to the conception, design, and methods of the study and to the writing of the article. M. Eastin contributed to the design, methodology, and analysis of the study. L. Hofschire contributed to the conception, methods, and analysis of the study and to the writing of the article. K. Lachlan contributed to the methodology of the study and to the data analysis. K.D. Brownell contributed to the conception and methodology of the study and to the writing of the article.

Acknowledgments

Financial support for this project was provided by the Rudd Foundation, Oakville, Calif.

Human Participant Protection

No human participants were involved in this project, and it was exempt from the institutional review board process.

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